

CLAIMS

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1. A card-type magnetic recording device comprising;
a disk housing space for housing a disk-shaped recording medium;
- 5 a head arm⁶⁰ carrying a magnetic recording/reproducing head^{26a} and causing the magnetic recording/reproducing head to move between a recording/reproducing position to obtain access to the disk-shaped recording medium loaded in said disk housing space and a standby position at a distance from the
- 10 disk-shaped recording medium;
a frame plate^(fig 9) which mounts said head arm and a disk drive device²⁷ for driving the disk-shaped recording medium loaded in said disk housing space, on one surface thereof; and
- 15 a circuit substrate²⁷, located on the other surface of said frame plate in overlap arrangement, having a plurality of elements arranged on the surface opposite to the surface facing said frame plate;
- 20 wherein said frame plate has an opening or a concave part allowing the magnetic recording/reproducing head placed in said standby position and/or a part of the head arm to be housed therein, allowing the magnetic recording/reproducing head to move between the standby position and the recording/reproducing position without interference with said frame plate.
- 25 2. A card-type magnetic recording device according to claim

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1, wherein said head arm is composed of an upper arm carrying the recording/reproducing head to gain access to the upside of the disk-shaped recording medium, and a lower arm carrying the recording/reproducing head to gain access to the underside of said disk-shaped recording medium, the part of the lower head arm and/or the head mounted on the arm is housed in the opening or concave part formed in the frame plate, and the distance between the magnetic recording/reproducing head mounted on the upper arm and the magnetic recording/reproducing head mounted on the lower arm in this state is made wider than the distance between said magnetic recording/reproducing heads placed in the recording/reproducing position.

3. A card-type magnetic recording device according to claim 1, wherein said opening is closed with an electromagnetic shield material by adhering it to the surface of the frame plate on the side opposite to the circuit substrate.

4. A card-type magnetic recording device according to claim 1, wherein an electromagnetic shield material is provided to close an open hole for relief of stress resulting from a process of drawing for formation of coil mounting slots in the frame plate for arrangement of a stator coil and/or a motor mounting concave part in the frame plate, on the side of the circuit substrate.

5. A card-type magnetic recording device according to claim

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1, wherein an electromagnetic shield material is adhered to the surface of the frame plate opposite to the circuit substrate to cover said opening, and another electromagnetic shield material is provided, integral with the electromagnetic shield material, to close an open hole for relief of stress resulting from a process of drawing for formation of coil mounting slots in the frame plate for arrangement of the stator coil and/or a motor mounting concave part in the frame plate, on the side of the circuit substrate.

6. A card-type magnetic recording device according to claim 3 or 4, wherein said electromagnetic shield material is made of copper foil.

7. A card-type magnetic recording device according to claim 1, wherein a reduced thickness portion obtained by forming said concave part in the frame plate also serves as an electromagnetic shield material.

8. A card-type magnetic recording device according to claim 1, wherein digital ICs are arranged on the circuit substrate in an area other than an operation area from the recording/reproducing position to the retreat position and its neighborhood area, without arranging any digital ICs on the circuit substrate in the operation area of said magnetic recording/reproducing head and its neighborhood area.

9. A card-type magnetic recording device according to claim 8, wherein analog ICs are arranged on the circuit substrate in

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the operation area of said magnetic recording/reproducing head and its neighborhood area.

10. A card-type magnetic recording device according to claim 8, wherein said disk drive device is a motor provided with a
- 5 stator having a plurality of winding parts formed by winding a plurality of cores with coils and a rotor driven by a revolving magnetic field generated in said stator, and the core or cores located in the operation area of said magnetic
- 10 recording/reproducing head from the recording/reproducing position to the retreat position and its neighborhood area, among the plurality of cores, are not wound with coils.
11. A card-type magnetic recording device according to claim 10, wherein said core is made of a magnetic material and is formed to arrange radially about the axis of rotation of said
- 15 rotor, and the core or cores wound with no coil, among said cores, are exposed to the outside.

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